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**From the Fifth Discipline to the New Revolution:
What We Have Learnt from Senge's Ideas over the Last Three Decades**

Abstract

Purpose

This paper aims to go through all Peter Senge's books since his influential book "*The Fifth Discipline: The Art and Practice of the Learning Organization*" in 1990, and see what kind of ideas that he has developed and the impact his books have created.

Design/methodology/approach

I use a book review method to identify prominent ideas in those books that have not only significantly challenged but also contributed to transforming the world of business and management in both academia and practice.

Findings

Among many great ideas that Senge has developed, spirituality, mental models, systems thinking, and a sustainability mentality are prominent ones, which have set up trends for both researchers and practitioners in business and management.

Originality/value

Those ideas are interwoven, intertwined, and have powerfully shaped new ways to see the world and act upon.

This is true joy in life, the being used for a purpose you consider a mighty one, the being a force of nature, rather than a feverish, selfish clod of ailments and grievances complaining that the world will not devote itself to making you happy (George Bernard Shaw).

Thirty years ago, Peter Senge published the book ‘The Fifth Discipline: The Art & Practice of the Learning Organization’, often called *The Fifth Discipline*. The book has created a new era in business and management. It inspirationally presented a framework of a learning organization where “*people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning how to learn together*” (Senge, 1990, p. 3). The book “came to be synonymous with the learning organization idea” (Örtenblad, 2013, p. 3); and “the learning organization was “born” as an idea in its own right (Örtenblad, 2019, p. 3). The concept of learning organization was inspired and blossomed soon after that by both academics and practitioners, e.g., Pedler, Burgoyne and Boydell (1991), Garratt (1991), Watkins and Marsick (1993), and Marquardt (1996). There are significant non-economic advantages to being a learning organization; and it is more valuable for organization’s ethical perspectives than just a description for how to achieve business success (Hansen, Jensen and Nguyen, 2019).

For the last 30 years, the world, particularly business, governments and education, have greatly benefitted from ideas that Senge has conceptualized and proposed, and the efforts that he has made for them. Senge co-founded the Academy of Systematic Change; a non-profit organization focused on advancing the field of awareness-based system change to accelerate ecological, social and economic well-being. He is the founding chair of Society of Organizational Learning (SoL), a global network of organizations, researchers and

consultants. He has developed leaders for businesses and governments for many countries outside the United States. The Journal of Business Strategy has named Senge as one of the greatest strategists of the 20th century.

Since *The Fifth Discipline*, Senge has articulated his great ideas in various books in which he has co-authored with other management thinkers such as Peter Drucker, Daniel Goleman, and Otto Scharmer. Table 1 presents all the books that Senge has published since 1990, and the number of citations of those books what were shown on the site of Google Scholar by 1st February 2020. I would like to emphasize the fact that academic citations do not necessarily reflect sufficiently the impact of Senge's ideas because we have not been able to capture how many practitioners have applied those ideas into their work, their organizational operations and their development, which, I firmly believe, have further exceeded those scholars' use.

This short article briefly highlights the critical contents of Senge's books and his prominent ideas in those books which have not only significantly challenged but also contributed to transforming the world of business and management in both academia and practice. Those books and ideas also make Senge stand out from a jungle of management thinkers. First, I go through all the books. Then, I explain why spirituality, mental models, systems thinking, and a sustainability mentality have set up trends for both researchers and practitioners in business and management. Those ideas are interwoven, intertwined, and have powerfully shaped new ways to see the world and act upon.

The Fifth Disciplines (1990, 2006), the Fifth Discipline Fieldwork (1994) and the Dance of Change (1999)

In *The Fifth Discipline*, Senge developed a framework of the learning organization with five key disciplines, namely personal mastery, mental models, team learning, shared

vision and systems thinking. Systems thinking is considered the most critical discipline of all, while personal mastery is the ‘spirit’ of the learning organization while team learning is the ‘foundation’ of the learning organization. I have spent the last decade exploring and applying Senge’s idea of the learning organization (e.g. Bui, 2019; Bui and Baruch, 2012; 2010)

Four years later, in 1994, Senge published *The Fifth Discipline Fieldbook* with Roberts, Ross, Smith and Kleiner to guide practitioners through specific strategies and tools to work with the five disciplines for building a learning organization. The book explains all the strategies and tools carefully with relevant and inspiring examples within various sectors and contexts.

Nine years later, 1999, Senge published the book *The Dance of Change* with Kleiner, Roberts, Ross, Roth and Smith. The book was also labelled as ‘A Fifth Discipline Resources’. It provides insiders’ perspectives on implementing learning and change initiatives at multi-national corporations such as BP, Shell, Chrysler, Ford, Toyota, Harley-Davidson, Mitsubishi Electric, General Electric, Xerox or Hewlett-Packard to answer the frequently asked question: *how do firms sustain the momentum of their learning and change initiatives?* Senge once stated that “The notion of embracing failure is nothing more than the actions of a learning organization” (Reese, forthcoming).

The Fifth Discipline edition in 1990 was Senge’s first book to the public, which was overwhelmingly welcomed by practitioners, but still received criticism from the academic world (e.g. Hsu & Lamb, forthcoming; Örtengren, 2007). Academics may not have initially noticed that Senge was more a practitioner than a researcher, or they had different mental models, or they simply wanted to provide feedback for a better edition. Academics, including myself when I first worked on the five disciplines, seem to have overlooked or failed to notice the two resources to facilitate ‘The Fifth Discipline’: ‘The Fifth Discipline Fieldbook’ (1994) and ‘The Dance of Change’ (1999), which has resulted in some unnecessary criticism.

Schools that Learn (2000, 2012)

A decade later, in 2000 Senge published the book *Schools That Learn* with Cambron-McCabe, Lucas, Smith, Dutton and Kleiner. This book is seen as another Fifth Discipline Fieldbook. Still, it is specially dedicated to the education sector, to all teachers, parents and everyone who cares about education and learning since the early ages. Learning by Senge is “a universal human activity whereby we go through some process over time that enhances our capacity to do something that we really want to do” (Reese, forthcoming). I guess that after working with corporate learning, mainly with middle and senior managers, Senge and his teams realized that a lot of problems could have been avoided, and more mindsets for sustainability would have been developed if the concept of learning organization had raised at schools, where young people had been equipped with systems thinking. I remembered in my communication with Senge in 2010 after I first met him in a conference in Boston, his PA (dear Diane) sent me materials of teaching systems thinking to K12 students showing Senge’s passion for transforming the education system.

Leading in the Time of Change (2001)

Leading in the Time of Change (2001) is a package consisting of a video and companion workbook that records a remarkable discussion between two great minds of modern management, Peter Drucker and Peter Senge, sharing their wisdom on how leaders can prepare themselves and their organizations for the inevitable changes that lie ahead. They talked about mental models for innovation rather than problem-solving, how to exploit unexpected opportunities under limited resources, and preserving trust and motivation within and above organization to sustain learning and top performers. ‘Leading the Time of Change’ is for practitioners rather than researchers.

Presence (2004; 2005; 2008)

Presence, written by Senge, Scharmer, Jaworski and Flowers in three editions, is a journey of discovery of how profound collective changes in people, organization and society are. The book presents leading-edge thinking, first-hand knowledge, and ancient wisdom to show a new way of seeing the world, and why we should be connected one to another. It once more reaffirms our mental models as a radical and hopeful power. It articulates seven capacities of our mental models to see, sense and realise opportunities. They are suspending (seeing our seeing), redirecting (seeing from the whole), letting go and letting come (transforming self and will, i.e., presencing), crystalizing (envisioning what seeks to emerge), prototyping (enacting living microcosms) and institutionalizing (embodying the new). *Presence* is seen as an additional chapter to the original five disciplines (Reese, forthcoming). It also acts as an anchor for a critical theory to be born: theory U by Scharmer (2009; 2016) and Scharmer and Kaufer (2013).

The Necessary Revolution (2008; 2010)

Going beyond the learning organization, *The Necessary Revolution*, that Senge co-authored with Smith, Kruschwitz, Laur and Schley, focuses on creating a sustainable economy. The book acts mainly as a call for business managers and leaders around the world to reject the ‘take-make-waste’ ethos. They need to change from problem-solving to creating new systems, and to transform their business models to stop the environmental and social crises because the world does not have much time left if we continue with the above ethos. With vivid stories and examples of individuals and organizations across the globe who are putting their ideas into action, Senge et al. (2008; 2010) urges every individual, organization and government into a ‘necessary revolution’ to act toward the vital sustainability goals with

systems thinking. Senge stated: “The spirit of the individuals and the culture of the organization matter a ton” (Reese, forthcoming).

The Triple Focus (2014)

The Triple Focus that Senge co-authored with Goleman examines the inner tools that people, particularly young people, need to contribute to and thrive in the world that is full of unprecedented social and ecological challenges. They suggest three vital skill sets namely inner (focusing on ourselves), other (turning in to other people), and outer (understanding the larger world) for young people to navigate in a world where the interconnections between people, objects and the planet matter more than ever. This book shows Senge and Goleman’s passion for transforming education, bringing social and emotional learning and systems thinking into schools for more necessary societal changes.

Key themes across all of these books are *change* and *leading change effectively*, indicating that change is an indispensable and unavoidable element of all people, organizations, and societies. Those themes have also been covered by many other thinkers and management strategists. In the next section, I analyze some key ideas derived from those books which potentially create significant impacts on the business and management world if people take them seriously.

Spirituality

Senge first mentioned spirituality in his first book when he mentioned personal mastery as the “spirit” of the learning organization: “[Personal mastery] *goes beyond spiritual unfolding or opening, though it requires spiritual growth*” (Senge, 1990; 2006, p. 131). Spirituality refers to “individuals’ drive to experience transcendence, or a deeper meaning to life, through the way in which they live and work” (Giacalone and Jurkiewicz, 2003, p. 87). However, Senge

neither defined nor explained that spirituality or spiritual growth in *The Fifth Disciplines* until his books *Presence*. Spirituality has been amplified in theology for centuries, but an alien aspect in modern business management until recently. For example, Collins (2010) showed that spiritual growth and development at work could provide energy to achieve superior financial performance and productivity in harmony with ethical behavior and spiritual transcendence. Senge once stated: “Love is the one emotion that expands intelligence because love connects us” (Senge et al., 2005, p. 240).

The *Presence* tells stories about Senge and his colleagues’ journeys of spirituality while exploring profound change in people, organizations and society. Such missions, if we attempt to start, will require us to develop our capacity to suspend from the habitual stream of thought to see the world with open hearts, rather than just with open minds: “Truth spoken directly from the heart and skilfully illuminated by the mind has a power that cannot be eliminated even in academic settings” (Senge et al., 2005, p. 146). The journey continues with open heart into silence to let things go, particularly the selfishness, and make a grand will – the larger and interconnected ‘we’ - emerge. It requires dialogue with the universe and the *Above*, and ultimately to become a force of nature and stay connected with it:

“Appreciating the universe as an emergent living phenomenon can be done only from the inside through cultivating the capacity to understand the living world and ourselves as an interconnected whole. This starts the journey toward a science performed with the mind of wisdom” (Senge et al., 2005, p. 201). Connectedness is seen as an organizing principle of the universe, linking the “outer world” of a visible phenomenon with the “inner world” of lived experience, and between humans and the larger world. Back in the 1990s, not many Western business and management scholars paid attention to spirituality. Thus, Senge appeared to set a new research path in business and management, though he might not have intended to do so.

Mental models

Senge is not the first one who referred to mental models because mental models had been well developed in cognitive science before that. The notion of a mental model was initially proposed by the psychologist Kenneth Craik (1943) that people carry in their minds a small-scale model of how the world works. However, Senge (1990) seems to be one of the pioneers to bring them into business and management. He defined mental models as “deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action”. Using mental models, Senge (1990; 2006) explained why the best business ideas can fail, and why mental models are so influential in affecting what we do. Some mental models can impede learning, while others can enhance it. Recognizing and dealing with the plurality of stakeholder’s perceptions, values, and goals is currently considered an essential aspect of active management. Thus mental models are used to reason and make decisions and provide the mechanism through which new information is filtered and stored (Jones et al., 2011). Senge (1990) has, as a result, stimulated a large research body on mental models in management and organizational studies, which was largely overlooked in organizational psychology (e.g., DeChurch and Mesmer-Magnus, 2010; Fassin et al., 2015; Martignoni et al., 2015).

Systems Thinking

Senge is not the first one who referred to systems thinking either because systems thinking was developed well before Senge’s time, for example, work by Churchman (1969; 1971), Ackoff (1974), and Checkland (1981). Senge did not develop a theory of systems thinking like those scholars or heavily mathematical models like Sterman (2010) that require managers to do a formal degree of education to acquire the knowledge of systems thinking.

What Senge has achieved is to turn those complex theories of systems thinking into something that is more ‘accessible’ for people to understand. He defines systems thinking as *“a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of changes rather than static snapshots ...; a discipline for seeing the “structures” that underlie complex situations, and for discerning high from low leverage change. That is, by seeing wholes, we learn how to foster health. To do so, systems thinking offers a language that begins by restructuring how we think”* (Senge, 2006, p. 68-69). Senge proposes ten systems thinking laws that are derived from other disciplines such as physics and psychology but powerfully explained in the context of business and management. The terms and laws of systems thinking from *The Fifth Discipline* have been used widely in leadership language, such as ‘the big picture’, ‘seeing the whole’, ‘you have a cake and eat it too...’ ‘things get worse before they get better’, or ‘small changes can produce big results’. According to Senge, human beings are natural systems thinkers, but like any innate capacity, this talent must be understood and cultivated.

More importantly, systems thinking is a golden thread in all Senge’s books sewing through all levels of his analysis of and proposal for learning and development for individuals, organizations and societies. *The Necessary Revolution* is an example. In that book, Senge takes the learning organization views to the level of more significant societal problems. The revolution originates from Senge’s work in the late 1990s with the SoL on sustainability (Reese, forthcoming). It requires all stakeholders to see and understand the systems that each and every one of whom is an integral part of the planet, and calls for collaboration across boundaries and borders. If in *The Fifth Discipline*, team learning is seen as the foundation of the learning organization, in *The Necessary Revolution*, collaborating across boundary and borders should be seen as the foundation of the sustainability revolution. Systems thinking is not about ‘predict-and-prepare’. It is about creating the future

(Gharajedaghi, 2011). Senge and his colleagues (2008; 2010) suggest that we should move from problem-solving to redesigning for a sustainability future.

Sustainability Mentality

In the first edition of *The Fifth Discipline* 30 years ago, Senge focused on developing systems thinking and building the learning organization for organizations to sustain themselves under uncertainty and complexity. In the second edition in 2006, Senge went further and beyond organizational boundary of sustainability. He mentioned that corporate sustainability could not be fulfilled if they did not take account of the global climate change system, and systems thinking is the seed for the sustainability mentality. He stated: “*The systems thinking, in different forms, is enabling us to see more interdependencies that we have seen in the past. It is those interdependencies which make you conclude that it is more than stupid, it is reckless to think of commercial sustainability in isolation, [without thinking of] either social or environmental sustainability*” (Senge, 2006, p. 349).

After having sowed the seed of sustainability mentality to corporates and organizations, mainly for their managers and leaders, Senge seemed to have realized that sowing that seed in early education would be more sustainable for the world. As a result, *Schools That Learn* was written. The book is about building schools as learning organization for their students, teachers, parents, and other related stakeholders because the learning organization is there to empower people, as Flood (1998, p. 268) wrote:

“Personal mastery may empower people by helping them to clarify and deepen personal vision and come to grips with intrinsic desires. Mental models may empower people by educating them about the way cognitive processes shape what they see and define their relationship with other people and the world. Shared vision may empower people by generating a common sense of purpose on which they focus energy in a

meaningful way. Team learning may empower people by aligning their thoughts and energies, which triggers resonance and synergy in learning. Systemic thinking may empower people by enabling them to begin to appreciate rather than be confused by the interrelated nature of the world and how this might explain their experiences.”

In addition, the connectedness in *Presence* is not only about spirituality, but also about sustainability mentality. Humans and the environment are interdependent; any harm from any side will affect the other, which is even better explained in *The Necessary Revolution*. *The Necessary Revolution* is dedicated to tackling the sustainability crisis based on the sustainable value framework of four strategies for (1) pollution prevention, (2) product stewardship, (3) clean technology, and (4) sustainability vision. The drivers for those strategies or sustainability values are (a) increasing industrialization with its side effects such as material consumption, pollution and waste generation; (b) civil society stakeholders with more requirements of transparency and connectivity; (c) disruptive technologies; and (d) global problems such as resource depletion, deteriorating ecosystems, climate change, poverty and inequality. Most examples in the book are to celebrate inspiring sustainability mentality around the world. Senge et al. (2008; 2010) concluded by emphasizing that all revolutions take time to transform, as does this revolution. That is why individuals, organizations and governments have to act together now before it becomes too late. Every one of us has to be a part of the solution for sustainability. Senge’s powerful message can be articulated by using Sinek’s (2019) words that the sustainability crisis is an ‘infinite game’; we can only choose how to play by nurturing sustainability mentality.

Closing remark

Unlike many other great minds in management who develop theories in small areas of management (see in Smith and Hitt, 2005), Senge developed ideas in multi-levels (i.e.,

individual, team and organizational levels), multi-layers (i.e., economic, societal, environmental layers), and connectedness (e.g., humans vs universe). In my opinion, ideas are sometimes more potent than theories because they leave more room to develop and evolve. Other great minds in management often develop theories for individuals and organizations to maximize the efficiency and effectiveness in social and economic behaviors. This is precisely how the current COVID-19 pandemic is playing out, when individuals, organizations and states try to maximize the efficiency and effectiveness in their own social and economic behaviors, but ignore or neglect the planet as an entirely interconnected whole. Senge differs. Senge and his colleagues suggest learning as a way to transform humans' mindsets and mental models to work together for a shared Earth. Our world may be ruined forever if we do not act together. This global COVID-19 pandemic can only stop entirely when the whole world act together. We need to restore our sustainable world with our mind, heart and hand, and particularly with spirituality, mental models, systems thinking, presencing, and sustainability mentality.

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Table 1: List of Senge's books and their citations

Year	Book title	Co-authors	Citations
1990/2006	The Fifth Discipline	N/A	63,621
1994	The Fifth Discipline Fieldbook	Kleiner, Roberts, Ross and Smith.	6,757
1999	The Dance of Change	Kleiner, Roberts, Ross, Roth and Smith	3,998
2000/2012	Schools That Learn	Cambron-McCabe, Lucas, Smith, Dutton, and Kleiner	4,346
2001	Leading in a Time of Change	Drucker	28
2004; 2005; 2008	Presence	Scharmer, Jaworski and Flowers	2,211
2008; 2010	The Necessary Revolution	Smith, Kruschwitz, Laur and Schley	1,209
2014	The Triple Focus	Goleman	39